**Module 4 Challenge**

1. **Summary of analysis**

The summaries of data show the following trends in school performance:

* **District summary:** Overall, students attained higher scores and higher passing rate in reading (82 marks and 86%) than in mathematics (79 marks and 75%).
* **School summary:** In general, charter schools have a smaller size, lower per student budget, and higher overall passing rates.
* **Highest-performing schools:** The highest-performing schools, which are all charter schools, have an overall passing rate of around 90%.
* **Bottom-performing schools:** The bottom-performing schools, which are all district schools, have an overall passing rate of only around 53%.
* **Math score by grade and reading score by grade:** Students of different grades tend to perform similarly within the same school.
* **Scores by school spending:** Schools with the lowest spending per student (<$585) attained the highest overall passing rate (90%), while schools with the highest spending per student ($645-680) attained the lowest overall passing rate (54%).
* **Scores by school size:** Schools of a smaller size (<1,000 students) attained higher overall passing rate (90%), while schools of a large size (2,000-5,000 students) attained the lowest overall passing rate (58%).
* **Scores by school type:** Charter schools attained higher overall passing rate (90%) than district schools (54%).

1. **Conclusions**

First, higher school spending does not necessarily result in better school performance. Charter schools performed better than district schools with higher overall passing rates, despite charter schools’ lower per student budget. As charter schools attained better performance with lower resources, charter schools may be more effective and efficient in the use of resource.

Second, smaller school size may explain better school performance. Charter schools, which are smaller in size in general, attained better performance. This may imply that small-class teaching is conducive to better performance.

A more detailed analysis of charter schools’ mode of operation / teaching could be conducted to draw lessons learned and best practices for district schools.